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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,199	02/22/2005	Tomoyuki Nakano	HOK-0260	7659

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RADER FISHMAN & GRAUER PLLC
LION BUILDING
1233 20TH STREET N.W., SUITE 501
WASHINGTON, DC 20036

EXAMINER	
BAISA, JOSELITO SASIS	

ART UNIT	PAPER NUMBER
2832	

DATE MAILED: 04/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/525,199	NAKANO ET AL.	
	Examiner	Art Unit	
	Joselito Baisa	2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 6-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *7,9,10,12,16,26,29,31,and 33* is/are allowed.

6)☒ Claim(s) *1,6,11,22,24 and 25* is/are rejected.

7)☒ Claim(s) *13* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 February 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2/22/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 13 is objected to because of the following informalities:

Claim 13 depends on claim 11claiming about a fixture is a "cap" and has an "opening" which are mentioned in claim 12 and not in claim 11. Therefore, claim dependency is incorrect.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kakehashi et al. [US 2002/01800572] in view of Shojiro et al. [JP2222509] and further in view of Oshima et al. [US 2002/0067232].

Kakehashi et al. disclose a bar-shaped ferrite core **3**; an inner winding **2** placed directly around ferrite core, the inner winding being an electrically insulated flat wire having a rectangular cross section and being wounded intimately around ferrite core with a length of the rectangular cross section extending perpendicular to the axis of ferrite core; an outer winding **1** wound over inner winding **2** [Page 12, Paragraph 199,

Figure50a]; a dielectric shield made of a molding material, dielectric shield being molded over outer winding **1**, inner winding **2**, and ferrite core **3** for sealing the same inside of the shield; a pair of output terminals **6** connected across inner winding **2** and exposed on dielectric shield, and a pair of input terminals **6** connected across outer winding **1** and exposed on dielectric shield [Page 13, Paragraph 206, Figure 57a], wherein outer winding has its circumference covered by a dielectric sheath [Page 2 ,Paragraph 21 , Figure 50a].

Kakehashi et al. discussed the claimed invention except for the outer winding has an intermediate winding portion between its winding start end and its winding stop end, said dielectric sheath in said intermediate winding portion being spaced from each other along the axis of said ferrite core to leave a gap thereat, said gap being filled with said molding material, wherein one turn of said outer winding is spaced along the axis of said ferrite core from the adjacent turns of said outer winding by a distance 10μm or more within said intermediate winding portion, wherein each of said winding start end and said winding stop end includes one to two close turns of said outer winding, wherein said dielectric sheath of the outer winding is made of a self-adhesive resin.

Shojiro et al. disclose an outer winding **3** has an intermediate winding portion between its winding start end and its winding stop end, winding portion being spaced from each other along the axis of ferrite core to leave a gap thereat, wherein one turn of outer winding is spaced along the axis of said ferrite core from the adjacent turns of the outer winding by a distance 10μm or more within the intermediate winding portion,

wherein each of the winding start end and the winding stop end includes one to two close turns of outer winding [Abstract].

It would have been obvious to one having ordinary skill in the art at the time of the invention to use the outer winding structure taught by Shojiro et al. to the transformer of Kakehashi et al.

The motivation would have been to facilitate the effective insulation of the transformer with the molding material.

Oshima et al. disclose a dielectric sheath **3** of the winding is self-adhesive resin [Page 2, Paragraph 21, Figure 1].

It would have been obvious to one having ordinary skill in the art at the time of the invention to use the dielectric sheath taught by Oshima et al. to the outer winding of Kakehashi et al.

The motivation would have been for keeping the outer winding in place around the inner winding.

Regarding claim 6, Kakehashi et al. disclose the instant claimed invention discussed above except for a heat-sealing layer on inner winding to secure the outer winding.

Oshima et al. disclose a heat-sealing layer **3** to secure the outer winding to the inner winding [Page 2, Paragraph 21, Figure 1].

It would have been obvious to one having ordinary skill in the art at the time of the invention to use the heat-sealing layer taught by Oshima et al. to the structure of Kakehashi et al.

The motivation would have been to secure the outer winding on top of the inner winding.

Regarding claim 8, Kakehashi et al. disclose a dielectric spacer C disposed around the circumference of the inner winding to space the outer winding from the inner winding [Page 14, Paragraph 214, Figure 50a].

2. Claims 11, 22, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kakehashi et al., in view of Shojiro et al. and Oshima et al. as applied to claim 1 above, and further in view of Fan [6680664].

Regarding claim 11, Kakehashi et al. in view of Shojiro et al. and Oshima et al. disclose the instant claimed invention discussed above except for the fixture attached to ferrite core for fixing the ends of said inner winding.

Fan discloses a fixture **2** attached to ferrite core for fixing the ends of inner winding [Col. 3,Lines 23-30, Figure 2B].

It would have been obvious to one having ordinary skill in the art at the time of the invention to use the fixture for fixing the ends of inner winding taught by Fan to the structure of Kakehashi et al., Shojiro et al. and Oshima et al.

The motivation would have been to provide a connection for the ends of the windings [Col. 3, Lines 65-67; Col. 4, Lines 1-2,Figure 2B].

Regarding claim 22, Kakehashi et al. in view of Shojiro et al. and Oshima et al. disclose the instant claimed invention discussed above except for the said fixture is fit into grooves formed in the end of said ferrite core so as to be secured thereto.

Fan discloses a fixture **2** is fit into groove **11** of the ferrite core [Col. 3, Lines 29-37, Figure 2B].

It would have been obvious to one having ordinary skill in the art at the time of the invention to have a fixture taught by Fan to the structure of Kakehashi et al., Shojiro et al. and Oshima et al.

The motivation would have been to secure the fixture.

Regarding claims 24 and 25, Kakehashi et al. in view of Shojiro et al. and Oshima et al. disclose the instant claimed invention above except for the fixture is provided with a terminal lug for retaining the end of said inner winding; and the fixture being of a conductive material.

Fan discloses a fixture **2** of a conductive material is provided with a terminal lug **21** for retaining the end of the winding [Col. 3, Lines 24-30, Figure 2B].

It would have been obvious to one having ordinary skill in the art at the time of the invention to use the conductive fixture provided with terminal lug taught by Fan to the structure of Kakehashi et al., Shojiro et al. and Oshima et al.

The motivation would have been to provide a contact point for the end of the transformer windings [Col. 3, Lines 65-67; Col. 4, Lines 1-2,Figure 2B].

The motivation would have been to secure the end of the winding.

Allowable Subject Matter

Claims 7, 9, 10, 12, 16, 26, 29, 31 and 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reason for allowable subject matter:

Claim 7 recites, inter alia, *one turn of outer winding spaced outwardly from inner winding.*

Claim 9 recites, inter alia, *dielectric spacer with guide groove.*

Claim 10 recites, inter alia, *dielectric spacer with means for retaining ends of inner winding.*

Claim 12 recites, inter alia, *fixture is a cap made of dielectric resin with which has an opening larger than the end face of the core and has a plurality of projections from the opening.*

Claim 16 recites, inter alia, *fixture has a pair of caps and joined by coupling arms.*

Claim 26 recites, inter alia, *fixture with retainer for the end of the winding and a leg inserted between the core and the winding.*

Claim 29 recites, inter alia, *fixture has terminal lugs that hold the winding extending out from the periphery of the core.*

Claim 31 recites, inter alia, *fixture is dielectric member retaining conductive terminal lugs connected to winding but electrically insulated from the core.*

Claim 33 recites, inter alia, *ferrite core with axial end notches to form flanges to fix the end of winding.*

The references of record do not teach or suggest the aforementioned limitation, would it be obvious to modify those references to include such limitation.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joselito Baisa whose telephone number is (571) 272-7132. The examiner can normally be reached on M-F 5:30 am to 2:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Joselito Baisa
Examiner
Art Unit 2832

jsb

ELVIN ENAD
SUPERVISORY PATENT EXAMINER
04/17/06